

**REMARKS**

Claims 1-10 are pending. No claims have been amended. Applicant respectfully requests reexamination and reconsideration of the pending claims.

**Rejections under 35 U.S.C. §§ 102(b) and 103(a):**

Claims 1, 6, 8 and 10 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Grangirard et al. (USPN 4,177,801). Claims 1, 4, 7, 8, 9 and 10 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Hickey (USPN 5,181,517). Claims 2, 3, and 5 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Hickey in view of Hoskins et al. (USPN 4,740, 203). Applicants respectfully traverse the rejections as follows.

Claim 1 sets forth, *inter alia*, a first balloon “configured for insertion into a blood vessel or body cavity having an internal wall,” and a second balloon “disposed outside the blood vessel or body cavity.” Applicant could find no teaching or suggestion of the claimed invention.

The first balloon is “configured for insertion into a blood vessel or body cavity.” This is in contrast to cuff 1 in Grangirard et al., which is specifically designed for external placement. Moreover, Grangirard et al. neither teaches nor suggests any inflatable element that is configured or structured for insertion inside a bodily vessel or cavity, in keeping with the goal of “non-intrusive” measurement of blood circulation parameters.

Moreover, the Examiner continues to contend that a portion of the tube branch disclosed in Grangirard et al. is an inflatable element, and thus can be considered a “second balloon.” Applicant respectfully disagrees with this view of the reference, since there is no teaching or suggestion that any portion of tube 2 is inflatable.

The Examiner cites Col. 13, lines 4-6 of Grangirard, which states “[t]ube 2 is preferably of flexible material such as rubber and the interior of the tube-circuit is about 2 mm” to allege that tube 2 is a “balloon” as set forth in Claim 1. Applicant contends that it is counter-intuitive to anyone of skill in the art to understand that Grangirard et al. discloses or even would have

desired that tube 2 be inflatable, even though it is made of rubber and can be filled with air, since the inflation of tube 2 would cause the pressure measurements at the pressure gauge to be incorrect. The “flexible material such as rubber” is used so that tube 2 is compliant for ease of use, however, there is no teaching or suggestion that tube 2 is intended to inflate.

Even assuming *arguendo* that tube 2 can be defined as a balloon, Grangirard et al. neither teach nor suggest “a first inflation lumen” which inflates the first balloon and a “second inflation lumen” that inflates the second balloon. Moreover, Grangirard et al. do not teach nor suggest “a pressure gauge communicating with the first inflation lumen and independently and simultaneously communicating with the second inflation lumen to permit a comparison of a detected pressure of the first balloon with a detected pressure of the second balloon.”

Thus, since Grangirard et al. neither teaches nor suggest features of the invention as set forth in Claim 1, Claim 1 is not anticipated by Grangirard et al. and is therefore allowable over the reference.

Further, the Examiner alleges that Hickey discloses a pressure measurement system comprising a first balloon 24 and a second balloon 150. However, in contrast to Hickey, the second balloon is “disposed outside the blood vessel or body cavity.” Placing the second or “bias” balloon 150 of Hickey outside of the body would be contrary to its stated purpose of “eliminating respiratory artifact” within the esophagus, which it does by “reflect[ing] esophageal pressure and thus record[ing] the respiration induced fluctuation in esophageal pressure” (column 11, line 65 to column 12, line 1). This function would be impossible to perform if the second balloon 150 in Hickey were disposed outside the body, as set forth in Claim 1.

Thus, claim 1, by defining the second balloon as being located outside the vessel or cavity in which pressure is being measured, is neither anticipated nor rendered obvious by Hickey.

In short, the Grangirard et al. reference has no teaching or suggestion of an inflatable element that is insertable into the body, while Hickey reaches two balloons, both of which must be located within the same vessel or cavity. Accordingly, neither reference, either by itself or in combination with any other art of record, teaches or suggests a pressure measuring apparatus comprising a first balloon within a vessel or cavity and a second balloon outside the vessel or

cavity, as defined in Claim 1. Therefore, it is respectfully submitted that Claim 1, as amended, is patentable over the art of record.

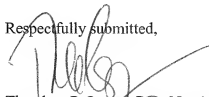
Claims 2-10 depend from Claim 1 and are therefore allowable for at least the same reasons as Claim 1 as well as for the novel features which they add.

**CONCLUSION**

For the above reasons, pending Claims 1-10 are in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, a telephone call to the undersigned at 949-955-1920 is welcomed and encouraged.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Theodore P. Lopez', is written over the typed name and address.

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